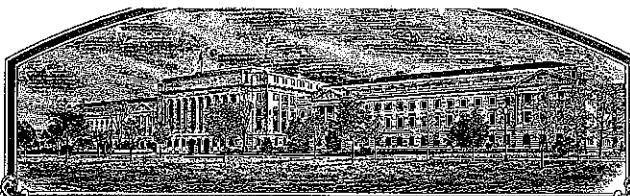


No.

200000165



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Virginia Tech Intellectual Properties, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

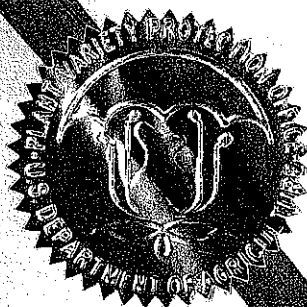
AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN MAKING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'566W'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of February, in the year two thousand two.



Attest:

P. M. Jubal

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Hereman

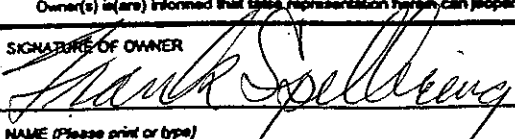
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICEAPPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

MAH
4-22-01

1. NAME OF OWNER Virginia Tech Intellectual Properties, Inc. FFR Cooperative		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME VA93-51-42	3. VARIETY NAME 566W
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 4112 E. State Road 225 West Lafayette, IN 47906		5. TELEPHONE (include area code) (765) 567-2115	FOR OFFICIAL USE ONLY PVPO NUMBER 00000165 FILING DATE 2-22-2000
		6. FAX (include area code) (765) 567-4046	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Wisconsin	9. DATE OF INCORPORATION 1960	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Frank Spelbring 4112 E State Road 225 West Lafayette, IN 47906			FILING AND EXAMINATION FEES: \$ 2450.00 DATE 2-22-2000 CERTIFICATION FEE: \$ 320.00 1-22-2002 DATE 2-22-2000
11. TELEPHONE (include area code) (765) 567-2115	12. FAX (include area code) (765) 567-4046	13. E-MAIL fspelbring@ffrcoop.org	14. CROP KIND (Common Name) Wheat, common
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		16. FAMILY NAME (Botanical) Gramineae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input type="checkbox"/> Exhibit B. Statement of Distinctness c. <input type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 43(a) of the Plant Variety Protection Act. <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no," go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
		21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Frank Spelbring		NAME (Please print or type)	
CAPACITY OR TITLE Wheat Program Director Vice President Marketing	DATE February 16, 00	CAPACITY OR TITLE	DATE

INSTRUCTIONS

200000165

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-6291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

- 18a. Give:
- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
 - (2) the details of subsequent stages of selection and multiplication;
 - (3) evidence of uniformity and stability; and
 - (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

US - offered for sale Aug. 1, 1999

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

SAT-470 (6-88) designed by the Plant Variety Protection Office with WordPerfect 6.0c. Replaces STD-470 (03-86) which is obsolete.

566W Wheat**18A. Exhibit A: Origin and Breeding History****Genealogy and Breeding Method.**

Experimental line VA93-51-42 was derived as an F9 re-selection of VA89-52-2, which was heterogeneous for glume color; i.e., segregating plants with white and bronze colored heads. The F10 headrow from which VA93-51-42 was derived had white colored glumes.

The parentage of VA93-51-42 is 'Coker 78-23'/'Coker 65-20'/'Arthur'. This cross was completed in 1980 at Virginia Tech, and the population was advanced using a modified bulk breeding method.

Population Advancement and Selection of the Variety.

VA93-51-42 was tested in the Virginia Tech Preliminary wheat test in 1992 and advanced tests in 1993 and 1994. Seed was made available to FFR cooperative and testing proceeded in the FFR testing program until a decision to advance the line was made.

Multiplication and Purification.

Foundation seed was produced at the Virginia Crop Improvement Seed farm in 1996 and 1997 and seed was increased by FFR in 1998 for commercial sales beginning in 1999. 566W has remained uniform and stable over seven generations (F₁₁-F₁₇). A taller variant with similar head characteristics and a shorter variant with awns have been observed in the variety and do not exceed one percent.

Ownership and Licensing

In an agreement between Virginia Polytechnic Institute and State University's Virginia Agricultural Experiment Station, Virginia Tech Intellectual Properties and FFR Cooperative, the ownership of the variety has been assigned to Virginia Tech Intellectual Properties and the responsibility for PVP application has been assigned to FFR Cooperative.

566W Wheat**18B. Exhibit B: Novelty Statement**

FFR 555W is susceptible to leaf rust races possessing virulence to gene Lr10, while 566W is resistant. In tests conducted by the USDA-ARS Cereal Disease Lab in 1993 and 1994, FFR 555W was susceptible and 566W resistant to the following races:

MFBL (Virulence for genes Lr1, 3, 10, 24, 26)

TDGQ (Virulence for genes Lr1, 2a, 2c, 3, 10, 11, 18, 24)

PNMQ (Virulence for genes Lr1, 2c, 3, 3ka, 9, 10, 18, 24, 30)

KCGL (Virulence for genes Lr2a, 2c, 3, 10, 11, 26)

LBBQ (Virulence for genes Lr1, 10, 18)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) FFR Cooperative	FOR OFFICIAL USE ONLY PVPO NUMBER 200000165
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 4112 E State Rd. 225 West Lafayette, IN 47906	VARIETY NAME OR TEMPORARY DESIGNATION 566W

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 0 8 9 or 0 9) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 3 = OTHER (Specify)
2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

FIRST FLOWERING LAST FLOWERING

4. MATURITY (50% Flowering):

0 0 NO. OF DAYS EARLIER THAN 8 1 = ARTHUR 2 = SCOUT 3 = CHRIS
0 5 NO. OF DAYS LATER THAN 7 4 = LEMHI 5 = HUGAINES 6 = LEEDS
7 = Madison 8 = FFR 555W

5. PLANT HEIGHT (From soil level to top of head):

1 0 2 CM. HIGH
0 5 CM. TALLER THAN 8 7 = Madison 8 = FFR 555W
0 0 CM. SHORTER THAN 7 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = HUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

1 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHOR COLOR:

2 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT

2 Waxy bloom: 1 = ABSENT 2 = PRESENT

1 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

1 Internodes: 1 = HOLLOW 2 = SOLID

0 4 NO. OF NODES (Originating from node above ground)

2 8 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT

1 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

2 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify):

1 Flag leaf: 1 = NOT TWISTED 2 = TWISTED

1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

1 2 MM. LEAF WIDTH (First leaf below flag leaf)

2 3 CM. LEAF LENGTH (First leaf below flag leaf):

11. HEAD:

☐ 1 Density: 1 = LAX 2 = DENSE☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify) _____☐ 2 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNEED☐ 2 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____☐ 1 0 CM. LENGTH☐ 1 0 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 3 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.)☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)☐ 2,4 Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE☐ 2 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 2 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL☐ 1 Check: 1 = ROUNDED 2 = ANGULAR☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG☐ 2 Brush: 1 = NOT COLLARED 2 = COLLARED☐ 4 Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
(See instructions): 4 = BROWN 5 = BLACK☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____☐ 0 6 MM. LENGTH☐ 0 3 MM. WIDTH☐ 3 3 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'☐ 2 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 STEM RUST
(Race)☐ 2 LEAF RUST
(Race)☐ 0 STRIPE RUST
(Race)☐ 0 LOOSE SMUT☐ 2 POWDERY MILDEW☐ 0 BUNT☐ OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY☐ 0 APHID (Bydv.)☐ 0 GREEN BUG☐ 1 CEREAL LEAF BEETLE☐ OTHER (Specify) _____HESSIAN FLY
RACES:☐ 0 GP☐ 0 A☐ 0 B☐ 0 C☐ 0 D☐ 0 E☐ 0 F☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering		Seed size	
Leaf size		Seed shape	
Leaf color		Coleoptile elongation	
Leaf carriage		Seedling pigmentation	

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggles and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Wallis, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

Exhibit D Additional Description

566W is a full-season, awnletted soft red winter wheat with good resistance to powdery mildew and leaf rust. Head emergence is similar to FFR 555W with plant height being medium-tall, similar to Madison. Straw strength is very good, similar to FFR 555W. Winterhardiness of 566W is moderate, similar to Madison. Grain test weight is very good and similar to Saluda. It has good milling and baking quality and produces high flour yields ranging from 75.5 to 77.3% extraction.

Additional disease reactions show 566W to be moderately resistant to leaf and glume blotch, barley yellow dwarf virus and wheat spindle streak mosaic virus. While broadly adapted, 566W is best adapted to the mid-south and eastern seaboard states of the US.

Table 1. Performance of VA93-51-42 Winter Wheat in Virginia 1992-1994.

Cultivar	Grain Yield (Bu/Ac)				Test Weight (Lb/Bu)			
	1992	1993	1994	1992-94	1992	1993	1994	1992-94
VA93-51-42	77	89	76	81	58.5	60.2	58.0	58.9
Massey	74	83	78	78	58.2	59.3	57.9	58.5
Saluda	69	90	74	78	58.0	60.7	58.1	58.9
Madison	75	94	82	84	57.0	59.6	56.6	57.7
FFR 555W	74	91	82	82	56.1	58.1	56.5	56.9
Coker 9803	72	97	86	85	59.9	62.3	58.7	60.3
GA-Gore	74	94	76	81	56.9	58.8	56.5	57.4
L.S.D.	8	6	5		1.3	0.8	0.4	

Cultivar	Heading Date (Mar 31+)	Plant Height (In.)	Lodg. %	Powdery Mildew %	Leaf Rust %	Septoria (0-9)	BYDV (0-5)	WSSV (0-5)
VA93-51-42	37	40	2	1	0	4	3	3
Massey	33	42	17	6	39	3	1	0
Saluda	36	38	16	24	10	4	3	4
Madison	32	40	7	6	6	4	1	0
FFR 555W	37	38	1	15	13	3	2	1
Coker 9803	33	37	10	7	4	3	1	2
GA-Gore	30	38	33	2	0	4	2	1

Table 2. Milling and Baking Quality of VA93-51-42 Wheat.

200000165

	Milling Score	Baking Score	Flour Yield	Softness Score	AWRC Score	Cookie Diameter
<u>1992</u>						
VA93-51-42	102.4	94.1	77.3	48.5	54.9	17.6
Massey	100.0	100.1	75.7	52.4	57.6	17.3
Saluda	95.8	90.2	74.3	53.2	58.4	16.7
Madison	94.8	78.1	75.2	48.2	54.1	16.9
Wakefield	96.5	87.4	75.0	51.6	56.1	16.9
<u>1993</u>						
VA93-51-42	103.5	104.1	75.5	53.3	52.0	18.3
FFR 555W	104.1	105.7	74.8	55.5	52.6	18.2
Pioneer 2548	98.5	83.5	72.8	58.1	58.0	17.4
Coker 9835	102.1	100.3	73.3	62.9	58.4	18.3
Coker 9803	100.0	100.0	73.5	55.2	56.2	18.1
GA-Gore	93.7	79.3	72.3	54.0	56.1	17.1

Table 3. Yield Performance of VA93-51-42 and VA93-52-9 in Trials Conducted by FFR Cooperative. All Data is Confidential and Solely for Use in PGRC in Making Recommendation for Release.

	Fisher AR	Jackson TN	Deyer TN	Guthrie KY	Fremont NC	Providence Forge VA	Four Trials* OH	Three Trials+ IN	Two Trials++ IL
	'94-96	'94-96	'94-96	'94-96	'94-96	'94-96	'94-95	'94-95	'94-95
VA93-51-42	64	64	77	87	51	82	70	82	70
VA93-52-9	58	58	72	83	44	76	74	86	76
FFR 555W	56	62	79	85	61	70	66	80	70
FFR 558W	63	62	77	81	40	64	71	79	65
Madison	60	63	73	82	44	74	67	69	73
Pioneer 2548	56	63	69	82	47	75	69	93	74

	Over Location Mean	Percent of Test	Percent of Mean	Percent of Mean	Percent of Mean
	Yield	Mean	Corn Belt	Mid South	East Coast
VA93-51-42	71.5	106.6	103.9	106.8	111.0
VA93-52-9	69.4	104.8	111.3	101.7	100.8
FFR 555W	69.7	104.6	98.2	104.8	115.7
FFR 558W	67.3	101.4	103.0	106.6	88.1
Madison	66.6	100.1	99.0	104.6	96.9
Pioneer 2548	69.5	104.3	---	---	---

* Mean yield of trials at Attica and Delphos, OH in 1995 and at Washington Court House in 1995 and 1996.

+ Mean yield of trials at Greensburg, IN in 1995 and at Lafayette, IN in 1994 and 1995.

++Mean yield of trials at Lawrenceville, IL in 1994 and at Flora, IL in 1995.

200000165

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) <i>MAK 11-27-01</i> Virginia Tech Intellectual Properties, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME 566W
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code) 200000165
	7. PVPO NUMBER	

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☐ YES ☒ NO

Developed by Virginia Tech - Production and marketing rights are exclusively licensed to FFR

9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☒ YES ☐ NO
If no, give name of country

10. Is the applicant the original owner? ☐ YES ☒ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

☒ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

STD-470-E (07-97) (Destroy previous editions).

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566W Wheat**18E. Exhibit E: Statement of the Basis of the Owner's Ownership**

In an agreement between Virginia Polytechnic Institute and State University's Virginia Agricultural Experiment Station, Virginia Tech Intellectual Properties and FFR Cooperative, the ownership of the variety has been assigned to Virginia Tech Intellectual Properties and the responsibility for PVP application has been assigned to FFR Cooperative.